

ABSTRACT

An evaporative cooling system for applying an electrical charge to a plurality of droplets in an intake airstream of a turbine engine to increase the propensity of the droplets to evaporate before the droplets reach the compressor. The evaporative

5 cooling system may include one or more fluid emitting devices for producing a plurality of droplets and may include one or more electrodes for applying an electrical charge to the plurality of droplets. The evaporative cooling system may also apply an electrical charge to one or more baffles positioned downstream of the fluid emitting devices and upstream from the compressor to collect droplets that have not

10 evaporated before the droplets reach the compressor.